

CLAIMS

1. A process for forming a tubular component including at least a first tubular element connected end to end with a second tubular element, the process including location an end portion of the first tubular element within an end portion of the second tubular element to thereby define respective inner and outer overlapping end portions, hydro-forming the overlapping end portions to radially expand the inner end portion into face to face contact with the outer end portion and in the region of the expanded overlapping end portions, mutually deforming the inner and outer end portions to define one or more mechanical lock formations for preventing relative axial movement between the first and second tubular elements.
2. A process according to claim 1 wherein the mechanical lock formations are formed simultaneously with the radial expansion of the overlapping end portions during the hydro-forming process.
3. A process according to claim 1 wherein the mechanical lock formations are formed subsequently to completion of the hydro-forming process which results in complete radial expansion of the overlapping end portions.
4. A process according to claim 3 wherein the mechanical lock formations are formed by one or more punches which are operated to cause mutual deformation of the overlapping end portions.
5. A process according to claim 4 wherein operation of said one more punches is performed whilst fluid used in the hydro-forming process is retained under pressure within the tubular elements.

6. A process according to any of claims 1 to 5 wherein the material for forming the first tubular element is selected to be the same as the material for forming the second tubular element.

7. A process according to any of claims 1 to 5 wherein the material for forming the first tubular element is selected to be different to the material for forming the second tubular element.

8. A process according to Claim 6 or 7 wherein the wall thickness of the first tube is selected to be the same or different to the wall thickness of the second tube.

9. A process according to any preceding claim wherein a barrier layer is located inbetween the inner and outer end portions prior to radial expansion.

10. A tubular component including at least a first tubular element connected end to end with a second tubular element by a connecting joint, the joint comprising inner and outer overlapping end portions formed from respective said first and second tubular elements, the inner and outer end portions being radially expanded into face to face contact by hydro-forming deformation, and one or more mechanical lock formations defined by mutually deforming the overlapping end portions.